

**A MAGNETIC MEMORY CELL STRUCTURE****Abstract**

The invention includes a magnetic memory cell. The magnetic memory cell includes a reference layer having a preset magnetization. A barrier layer is formed adjacent to the reference layer. A sense layer is formed adjacent to the barrier layer. A first conductive write line is electrically connected to the reference layer. The magnetic memory cell further includes a second conductive write line having a gap, the gap being filled by at least a portion of the sense layer. A write current conducting through the second conductive write line is at least partially conducted through the portion of the sense layer, the write current increasing a temperature of the sense layer.